



Unified Build 3.0.1.6G

System Administrator's Guide

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TECHNICAL BULLETINS

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Unified Build Tech Bulletin

Cross Reference Table

This manual is shipped with all Technical Bulletins created to date. Technical Bulletins are created and distributed as the need becomes apparent. New bulletins are sometimes distributed between releases, and should be added to this section of the manual as you receive them.

Technical Bulletins may reference only a single version of the software or several different versions of the software.

NOTE: As of Unified Build 3.0.1.5G (28 August 96), there are no Technical Bulletins distributed.

Notes

FOREWORD

The *Unified Build System Administrator's Guide* describes the setup and maintenance of Unified Build (UB) and also provides information about UB security administration in the GENSER and SCI environments.

This guide is divided into two sections: SYSADMIN Options and SECMAN Options. Each main section contains several subsections describing specific menu functions available under the specified user login.

SYSADMIN Options:

INTRODUCTION

Summarizes the JMCIS software environment and installation configurations. Provides additional sources of information. 5

SYSTEM ENVIRONMENT

Describes the hardware requirements and operating system..... 9

OPERATING GUIDELINES

Explains startup and shutdown of the software and hardware, and lists database limits for various UB files. 15

SYSTEM ADMINISTRATION UTILITIES

Describes the functions available to a sysadmin user account, such as data backup and system reboot. 21

COMMUNICATIONS

Provides information about networks, physical interfaces to the system, communications and broadcast configuration and troubleshooting. 55

ERROR RECOVERY GUIDELINES

Describes potential problems, errors, and solutions. 77

SECMAN Options:

INTRODUCTION

Summarizes the security menu screen. 85

SYSTEM MENU

Options to set menu font size for the security application and to exit the system. 87

SECURITY MENU

Options to update audit status, review audit information and archive audit logs..... 91

ACCOUNTS MENU

Options to create, edit, review, maintain, archive, restore, and export roles and user accounts..... 101

PRINTING

Creating and using printers. 115

SYSADMIN OPTIONS

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CHAPTER 1: SYSADMIN INTRODUCTION

The SYSADMIN portion of this guide describes the setup and maintenance UB. Unified Build was derived from the Joint Operational Tactical System (JOTS)– a command and control system originally designed for the afloat Navy.

The following chapters describe menus and options available on the menu bar under the SYSADMIN login.

SYSTEM ENVIRONMENT

Describes the hardware requirements and operating system..... 9

OPERATING GUIDELINES

Explains startup and shutdown of the software and hardware, and lists database limits for various UB files. 15

SYSTEM ADMINISTRATION UTILITIES

Describes the functions available to a sysadmin user account, such as data backup and system reboot. 21

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Provides information about networks, physical interfaces to the system, communications and broadcast configuration and troubleshooting. 55

ERROR RECOVERY GUIDELINES

Describes potential problems, errors, and solutions. 77

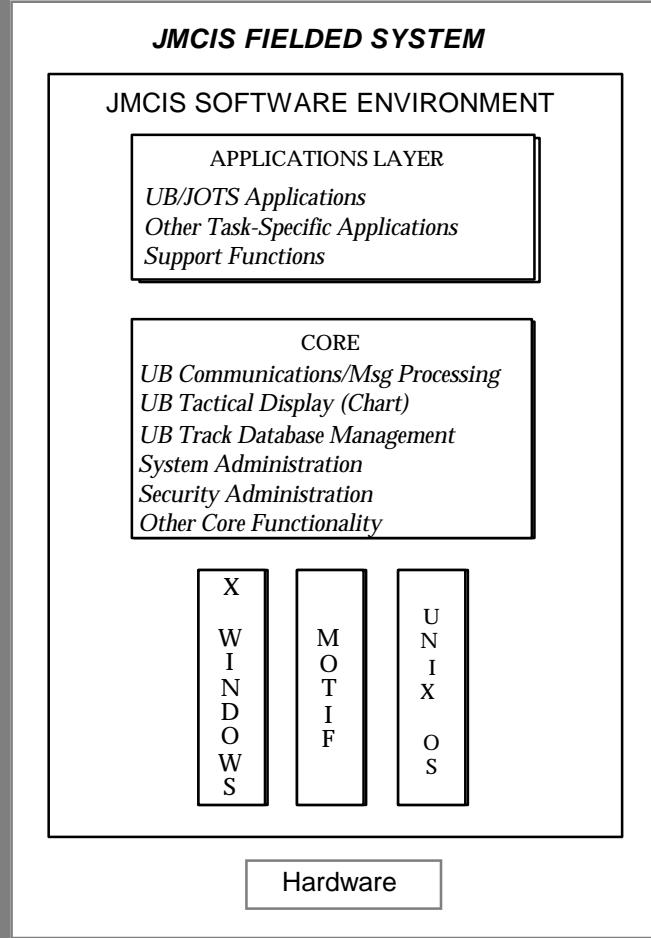


Figure 1-1 Core Components of JMCIS

1.1.1 INSTALLATION CONFIGURATIONS

When JMCIS operates in standalone configuration, all functions are performed on a single workstation. The standalone configuration is typically used for intelligence applications for which security restrictions, such as discretionary access controls, may preclude the typical network configuration.

When multiple workstations are configured on a local area network (LAN), typical system configuration consists of one workstation serving as communications

processor (CP) and track database manager and all others acting as clients. The server provides the shared tactical picture for the LAN.

Workstations on a LAN may also be configured as a combination of work groups and standalone machines. Each JMCIS work group operates as a separate LAN, with one workstation in the group acting as server and all others acting as clients.

For details on installation configuration, see Chapter 4, *System Installation*.

1.1.2 JMCIS FUNCTIONALITY

The functions described in this document may not correspond with those available on a particular workstation. Factors that determine the availability of functions include:

- LAN classification
- workstation classification
- user's account group, role, and classification

1.2 ADDITIONAL SOURCES OF INFORMATION

JMCIS Security Manager's Guide— explains security administration functions, including user accounts and roles.

JMCIS System Administrator's Guide— provides information regarding configuration, installation, and troubleshooting for all JMCIS segments, including NIPS, TIMS, NIEWS, etc.

Unified Build Training Manual— a self-paced tutorial on basic system components.

Unified Build User's Guide— describes each menu option within the JMCIS COE, JMCIS Applications, and Printer segments.

Other task-specific applications are described in separate documents.

Notes

CHAPTER 2: SYSTEM ENVIRONMENT

Host computers for the current JMCIS software suite are:

- TAC-3/4 (Tactical Advanced Computer, version 3)
- RSC-1X/2X (Gray Box)
- Sparc 10/20

2.1 HARDWARE COMPONENTS

The software uses one hard disk for the UNIX-based operating system and all core applications. If necessary, the second hard disk is used to load additional segments and to store data elements, such as extra map data.

2.1.1 TAC-3/4 HARDWARE

- HP 9000/7xx, with 64–192 MB of RAM
- *at least* one 1.2 GB hard disk drive
- 1.2-2.0 GB DAT drive (required to install the software)
- monitor
- HP keyboard
- HP trackball
- 1–2 graphics boards, each with 1–2 outputs
- two serial ports

Optional

- color large screen display (CLSD)
- floppy disk drive
- cartridge tape drive
- 5 GB, 8 mm Exabyte tape drive
- Sun keyboard and trackball with HP/Sun keyboard interface assembly*
- CD ROM
- EISA audio card (Pro AudioSpectrum or Pro AudioStudio)
- 8 or 16 port multiplexers (MUX) (Danford or Equinox) for Sun keyboards only

*To allow distant remote configurations, standard shipboard installations are delivered with a Sun keyboard and trackball, rather than HP. An HP keyboard is required to install the operating system tape, but the Sun keyboard and trackball are used to install segments and run the system.

2.1.2 RSC GRAY BOX COMPONENTS

- Sun IPX CPU, with 64 MB of RAM
- S-BUS to VME bus interface
- one 1.2 GB hard disk drive (optional if an RSC-2X is connected)
- floppy disk drive
- 10.4-inch monitor (used optionally with a second display)
- Sun-4 compatible keyboard
- 3-button trackball
- DAT drive
 - external (RSC-1X)
 - internal (RSC-2X)
- 1.2 GB hard disk drive
 - one (either 1X or 2X)
 - two (one in each)
- CD ROM (RSC-2X)

2.1.3 SPARC 10/20 HARDWARE

- Sun Sparc10/20 with 64–192 MB of RAM
- *at least* one 1.2 GB hard disk drive
- 1.2-2.0 GB Sun DAT drive (required to install the software)
- CD ROM
- monitor
- Sun keyboard
- Sun trackball
- 1–2 graphics boards, each with 1–2 outputs
- two serial ports

Optional

- color large screen display (CLSD)
- floppy disk drive
- cartridge tape drive
- 5 GB, 8 mm Exabyte tape drive

2.2 MULTI-MONITOR CONFIGURATIONS

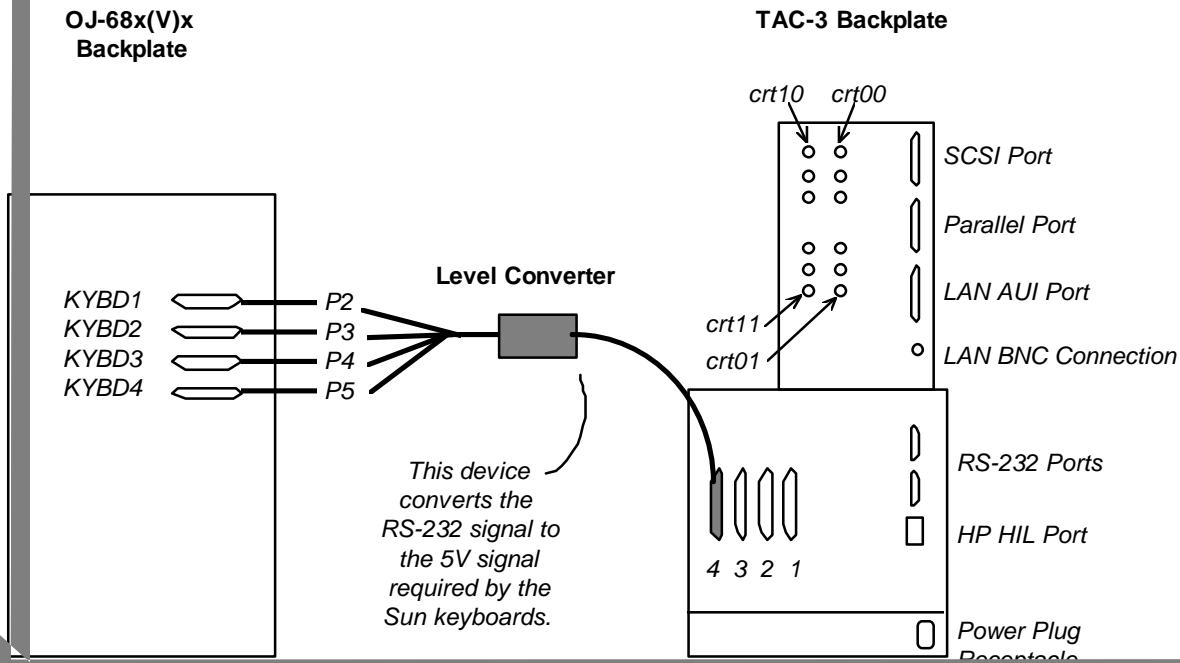
A single, properly equipped TAC-3 CPU can drive any of the following configurations:

- a single-eye console with 1–3 single-eye remote monitors
- a dual-eye console with 1–2 single-eye remote monitors
- a dual-eye console with a dual-eye remote monitor

Keyboards

- If an HP keyboard is used, only a single-eye console with *no* remote monitors may be set up. (The HP keyboard is connected via the HIL port.)
- For multi-monitor configurations, Sun keyboards *must* be used.
- The HP and Sun keyboards should *not* be connected to the CPU at the same time.

Figure 2-1 shows the rear view of a standard TAC-3 CPU. Ports in the multi-monitor connection scheme are indicated.



Single-Eye Console	Remote 1	Remote 2	Remote 3
Monitor: crt00 Keyboard: KYBD4	None	None	None
Monitor: crt00 Keyboard: KYBD1	Single-eye Monitor: Keyboard: crt01 KYBD2	None	None
Monitor: crt00 Keyboard: KYBD1	Single-eye Monitor: Keyboard: crt01 KYBD2	Single-eye Monitor: Keyboard: crt10 KYBD3	None
Monitor: crt00 Keyboard: KYBD1	Single-eye Monitor: Keyboard: crt01 KYBD2	Single-eye Monitor: Keyboard: crt10 KYBD3	Single-eye Monitor: Keyboard: crt11 KYBD4

Dual-Eye Console

Dual-Eye Console		Remote 1	Remote 2
Top Monitor: Bottom Monitor: Keyboard:	crt01 crt00 KYBD1	None	None
Top Monitor: Bottom Monitor: Keyboard:	crt01 crt00 KYBD1	Single-eye Monitor: Keyboard:	crt10 KYBD4
Top Monitor: Bottom Monitor: Keyboard:	crt01 crt00 KYBD1	Single-eye Monitor: Keyboard:	crt10 KYBD3
Top Monitor: Bottom Monitor: Keyboard:	crt01 crt00 KYBD1	Dual-eye Top Monitor: Bottom Monitor: Keyboard:	crt11 crt10 KYBD3
			None

For potential difficulties the user may encounter in a multi-monitor environment, see *Troubleshooting Multi-monitors* in Chapter 6.

2.3 THE JMCIS OPERATING SYSTEM (OS)

The JMCIS OS is a modified version of the UNIX OS, which accompanies the original hardware.

The JMCIS OS tape contains software relating to four areas:

- The operating system.
- The administration software required for installation, and for system and security administration.
- X Windows software.
- Motif software.

When a change is required in one or more of these areas, a new tape is built and the version number is increased by one. Thus, a change in the JMCIS OS tape may not be— and in fact is usually not— the result of a change to the “operating system.”

Notes

CHAPTER 3: OPERATING GUIDELINES

3.1 POWER DOWN

- Never power down the system without first executing a shutdown, as described below. Doing so could cause irreparable damage.
 - If the system has already been brought down improperly, refer to Chapter 6, *Error Recovery*.
1. Select EXIT from the SYSTEM menu in the main menu bar.
 2. Log in with a sysadmin account and password.
 3. Select SHUTDOWN SYSTEM from the HARDWARE menu.
 4. Wait until the following message appears: “syncing file systems... done. Halted.”
 5. Turn off the peripherals, including the monitor.
 6. Turn off the computer.

3.2 POWER UP

1. Turn on the Uninterruptable Power Supply (UPS) if necessary.
2. Turn on the peripherals, including the monitor.
3. Turn on the computer.
4. Enter assigned login and password at the prompts. The machine name is displayed In the login window.

3.3 DATABASE SIZE LIMITS

TRACKS	LIMITS
Platform/Ambiguity	1500
Emitter	1500
Link	1024
Acoustic	100
Unit	500
SPA-25G	400
RAYCAS	50
SI	450
FCS	100
External	0
Total 5624 (Max 6774)	

OTHER TRACK RANGES	LIMITS
Confidence Level of AOU Cross-fix Ellipse	90%
Dynamic Status Board	1 master track / 20 slave tracks
Land Sites	100
Missile Systems/track	10
Radar Systems/track	10
Sonar Systems/track	10
Weapon Systems/track	10
Specific IFF Mode-2 Valued Tracks Can Be Archived	20
Specific NTDS Track Numbers Can Be Archived	20
Track Archive Sequence of Steps	60 seconds
Track Groups	32
Tracks/group	Limited only by disk storage
Track History Reports/track	1,000
Track Symbol Label	26 characters
Tracks JMIE Database Will Send	10

COMMUNICATIONS	LIMITS

(V) 6 Queue	50 messages
Addressee (Channel Message Buffer Manager)	1,000 backlog messages
Alert Log	1,000 messages
Incoming Message Log	1,000 messages
Incoming Opnote Log	200 opnotes
Outgoing Message Log	1,000 messages
RAINFORM Messages	1,000 lines
Received Messages Displayed in Status Window	1,000 messages
Report Log	2,000 reports
Saved for Raw Messages	500 lines

MISC	LIMITS
Auto-Forwarding, Addresses	500
Broadcast, User-Set Cycle Rate	0–720 minutes
Broadcasts, Active	25
Characters Stored per Screen Name	50
Clipboard, Files Stored on	1,000
Engagement Scenarios	10
Grid Cells, Number of	24 or 48
HULTEC Database	650
IFF/DIs, Nicknames	100
Incoming Message Alert, Addresses	5
Incoming Message Alert, Originators	5
Net Address (DDN)	256
PIM Tracks	100
PIM Track Legs	256
SAR Patterns in SAR Database	20
Satellite Charlie Elements	300
Satvul-Satellites per Category	300
Screen-Kilo Formations	100
Screen-Kilo, Ships per Formation	50
Stored Screen, Briefing Slides	50
Stored Screens, Number of	50
4-Whiskey Formations	100
4-Whiskey, Ships per Formation	50

MAPS	LIMITS
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Key Sites	1,000
ROTHR Display of RTN on Map	15 characters
Stored Map, Parameter Combinations	500
Stored Maps	20
Zoom Width, Greatest	21,600 NM
Zoom Width, Smallest	0.25 NM
OVERLAYS	
Overlay, Items	100
Overlay, Points	256
Overlay, Polyline Points	256
Overlays, Number of	500

Notes

Notes